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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/624,605	07/25/2000	Masao Akimoto	P19818	7588

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EXAMINER

THOMPSON, MARC D

ART UNIT	PAPER NUMBER
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2144

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/624,605

Applicant(s)

AKIMOTO ET AL.

Examiner

Marc D. Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/22/2003, Paper #7, Amendment A.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3, 5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This application has been reassigned to a new Examiner. See Conclusion section below, for new Examiner contact information.
2. Amendment A, Paper #7, received 12/22/2003, has been entered into record.
3. Claims 10-16 are now pending.

Priority

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
5. The effective filing date for the subject matter defined in the pending claims in this application which have support in Japanese Application 11-352035, is 12/10/1999.

Drawings

6. The Examiner contends that the drawings submitted on 7/25/2000 are acceptable for examination proceedings.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 10-16 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
9. Overall, the independent claims are awkward, difficult to parse, and lean toward idiomatic English language usage. The following detailed analysis may not be all inclusive,

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since interpretation of the claims is hindered by the inability to properly ascertain the metes and bounds of the claimed invention.

10. Claim 10, 15, and 16 recite "...[generating] an error message one of when the response...and when the response..." in Line 6 of Claim 10, Line 9 of Claim 15, and Line 4 of Claim 16. This limitation makes reading of the claim difficult due to idiomatic English usage, specifically, the portion "one of when", further in combination with the conjunction "and" rather than "or". The meaning of this portion of the claims is simply ambiguous. It is unclear whether the invention is limited to one type of error generation, whether both conditions are considered, and whether only one error message is generated should both conditions be satisfied. It will be assumed that this portion of the claim(s) is intended to read "...[generating] an error message whenever the response to the command is not received for a predetermined time and when the response to the command is incorrect...", reciting functionality which provides a single error message generation whenever either or both the conditions (i.e., the response to the command is not received for a predetermined time, or, the response is incorrect) are met.

11. Claim 10 recites "[transmitting an IP packet] being an 'Echo request' packet which requests the apparatus to transmit the IP packet back to the error informing apparatus". See, for example, Claim 10, Lines 10-11.

a. First, this additional 'apparatus' renders the claim indefinite due to the inability to ascertain what device or software process, if any of those previously or currently defined in the claim, is being referenced, precise interaction with the inventive system as a whole or in part, and whether this 'apparatus' is distinct from the 'analyzing apparatus'. This [unnamed] apparatus receives the IP packet (Claim 10, Line 9), is connected to, is

accessible over, and is addressable on the LAN, and is requested to respond to the “Echo request” packet (Claim 10, Line 11). Any other assumed facts about this device are just that, assumed. The indeterminate definition of this ‘apparatus’ is completely indefinite. This problematic lack of definition leads to further cryptic understanding of what the Applicant intends the claimed invention to encompass. Resultantly, the inability to ascertain any specific metes and bounds of the claim as a whole, and any specific requirements necessary to determine what device(s) may be construed for equivalency to this [unnamed] ‘apparatus’, renders the claim indefinite. Some dependent claims seemingly rectify this descriptive deficiency, for example, claim 11 and 12, by qualifying the device as a particular type serving a function on the network. Sufficient clarification in the base claim(s) is required for concise and clear understanding of the claimed invention and any/all functional equivalents to the claimed device(s) and functional elements.

b. Second, “the IP packet” transmitted back to the error informing apparatus (Claim 10, Line 11, Line 13) is NOT the same IP packet “Echo request” (Claim 10, Line 8-9) which effects response. There appears to be no claimed distinction between the “Echo request” IP packet as claimed, and the actual response to this packet (i.e., the ‘echo’ itself). This causes major problems with the understanding of the claimed invention. For example, it is unclear what packet the “controller” (Claim 10, Line 4) “forwards [to a device on] to the LAN” (Claim 10, Line 12). Clearly, the response IP packet (e.g., PING response, ACK, etc.) differs minimally having reversed source and destination address headers. In reality, there are multiple other differences also. It is suggested that each IP packet generated, transmitted, received, processed, routed, or examined in any fashion be

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unambiguously defined and delineated. In the present case, the “Echo request” IP packet is decidedly distinct from an echo request response. Thus, referencing both these distinctly separate packets with the same logical label renders the claim(s) indefinite.

c. Lastly, and most importantly, is the inability to determine whether the “Echo request” or the resulting echo response packet (i.e., an “Echo reply”) is described when the error information apparatus (controller) forwards this packet to an analyzing apparatus.

12. Claim 10, Line 12-13 recites “forward[ing] the ‘Echo request’ packet to the LAN when...” Packets are not forwarded to networks, rather, packets are forwarded (routed) to device(s) having common addresses with the destination address contained in the header of packet(s). The provision for forwarding of packet(s) to a network is misleading, and ambiguously defines the precise functionality occurring. When sending a packet, the destination is/was known, since the packet header must designate a destination address for subsequent routing decisions. Clarification of precisely where any/all recited transmitted packets are destined is suggested.

13. Dependent claims relying on independent claims for antecedent basis inherit all of the deficiencies of these parent claims. Likewise, any independent claims sharing similar or identical deficiencies in presented limitations are commonly rejected. For example, claim 10 is used extensively above in referencing specific noted deficiencies, but claim 15 contains substantially identical subject matter in the latter half of the claim. Claim 16 also substantially parallels claim 10, and shares many of the same problems as claims 10 and 15. Applicant is advised to closely inspect the claimed invention in all the claims, independent and dependent alike, and remedy the above conditions, and any other conditions that may exist, in order to

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result in clear and concise subject matter for patentability determinations during future consideration by the Examiner.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. §103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR §1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. §103(c) and potential 35 U.S.C. §102(f) or (g) prior art under 35 U.S.C. §103(a).

16. Claims 10-16 are rejected under 35 U.S.C. §103(a) as being unpatentable over Conta et al., "Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification", Request for Comments (RFC) 2463, December 1998, hereinafter referred to as RFC 2463, in view of Bullard et al. (U.S. Patent Number 6,405,251), hereinafter referred to as Bullard, further in view of what would have obvious to one of ordinary skill in the art at the time the invention was made.

17. Commensurate with the specification, claimed invention, and the response (Paper #7), the invention deals with the use of a “echo request” message sent to a (logical) second network device (in this case, an e-mail server) from a (logical) first network device (in this case, a network facsimile machine), the subsequent return of an “echo reply” from the second device, and the forwarding of the “echo reply” message from the first device to another arbitrary (logical) network device, such as a router, gateway, or other managing or recording network device equipment. The use of the term “logical” designates that the first and second “devices” are actually processes, which execute on arbitrary computer networked terminals; “servers” are simply programs executing attached to a network, and no direct inference of distinct machines can be decidedly assumed. The initial “echo request” message is generated by the first device in response to one or more of two conditions, namely, response to a command (issued to the second device) is not received within a predetermined interval, or, response to the command (issued to a second device) is incorrect (or not expected). All the gathered information which has been forwarded to this arbitrary network process/device is then processed and analyzed by yet another network node terminal.

18. RFC 2463 disclosed the use of ICMPv6 for the purpose of error reporting and informational reporting, namely, Time Exceeded error, and Parameter Problem error message(s). See, inter alia, Section 2.1, Page 3, Section 3.3, Page 9, Section 3.4, Page 10. That is, these error messages were generated in response to determined errors. Further, in Sections 4.1 and 4.2, Pages 11-13, “Echo request” and “Echo reply” messages were expressly taught, the provision mandate for Echo responder functions, and direct suggestion for each and every node to send Echo request(s) and receive Echo reply message(s) for diagnostic purposes. RFC 2463 also

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specifically disclosed that “Echo Reply message(s) MUST be passed to the process that originated an Echo Request message.” Most importantly, the following sentence stated “[The Echo Reply message] may be passed to processes that did not originate the Echo Request message.” See, Section 4.2, Pages 12-13. This is a direct suggestion to one of ordinary skill in the art at the time the invention was made to search the related arts for teachings relating to other types of processes which would utilize Echo Reply messages.

19. While RFC 2463 disclosed significant portions of the claimed invention (since the invention relies on ICMP error and information messages), RFC 2463 did not expressly disclose the forwarding of IP/ICMP packets/messages to another network node upon receipt of an “Echo Reply”. RFC 2463 only suggests that message information be passed to “upper level process(es)”, but failed to specifically recite a specific process functioning to forward the IP information to another node and resultantly have that information

20. In the same art of ICMP message processing and network communications, Bullard expressly disclosed data collectors which functioned to monitor activity on a communication link between two network devices in a variety of ways. See, inter alia, Column 3, Lines 55-67, and Figures 1-5. Noteworthy was the usage of the disclosed invention for application monitoring and accounting (Column 3, Lines 16-25), and modular type functionality providing purely distributed, secular servicing (Column 4, Lines 49-61). One data collector, a “flow probe” was enabled to function “in-line” (integrated into the network terminal components) or “out-of-line” (requiring copying and delivery of packet information). See, Column 24, Lines 40-47. The teachings dealt directly with ICMP (Column 25, Lines 11-39), ICMP events (i.e., echoes, requests, responses, errors, etc.)(Column 25, Line 66 through Column 26, Line 20), specifically,

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time out errors and parameter problems (defined in RFCs)(Column 26, Lines 21-40), application recognition, acknowledgement and accounting (Column 26, Lines 41-56), and selective “filtering” of particular message type(s) and error reporting (Column 27, Lines 1-17, and Column 27, Line 66 through Column 28, Line 7). Location of monitoring hardware/software, integration of functional components into logical or physical terminal equipment, and resultant monitoring/managing of resources was evident. See, inter alia, Column 5, Lines 22-27, Column 6, Lines 1-31, Column 29, Lines 9-16, and Column 32, Lines 28-65.

21. Examiner takes Official Notice (see MPEP § 2144.03) that e-mail and facsimile servers, conversion between these (and other formats) for information transmission (typically called integrated or universal messaging), implemented on an arbitrary network (since wide area network WAN, local area network LAN, home area network HAN, vehicular area network VAN, etc., are all logically equivalent networks simply defined by all the networked devices having a uniform naming convention, i.e., network level address, e.g., IP), was well known and widely implemented by ordinary artisans in a computer networking environment at the time the invention was made. Thus, since details relating directly toward specific device(s) performing explicit functionality are not precisely provided in the claim, the inclusion of facsimile machines, mail servers, conversion modules for bi-directional image-to-text translation, and LAN specifics will not be specifically treated in these rejections. Further, any future determination of patentability will not be based on the inclusion of any of these well known and widely implemented functional features.

The Applicant is entitled to traverse any/all official notice taken in this action according to MPEP § 2144.03. However, MPEP § 2144.03 further states “See also *In re Boon*, 439 F.2d

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724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice).” Specifically, *In re Boon*, 169 USPQ 231, 234 states “as we held in *Ahlert*, an applicant must be given the opportunity to challenge either the correctness of the fact asserted or the notoriety or repute of the reference cited in support of the assertion. We did not mean to imply by this statement that a bald challenge, with nothing more, would be all that was needed”. Further note that 37 CFR § 1.671(c)(3) states “Judicial notice means official notice”. Thus, a traversal by the Applicant that is merely “a bald challenge, with nothing more” will be given very little weight.

22. The combination of the teachings set forth by RFC 2463 and Bullard would have been obvious to one of ordinary skill in the art at time of invention since (a) the use of ICMP in the system of Bullard would have resulting directly in the incorporation of the ICMP definition(s) for compliance to a given protocol standard, and/or (b) RFC 2463 directly suggested the use of processes for utilization of ICMP control message receipt. Also, The Bullard system provided a functional working model for efficient and effective network resources accounting, an inherent concern in the networking field.

23. As noted above, e-mail and facsimile devices attached to an arbitrary network were widely known in the art. See, *inter alia*, TOYODA et al. (U.S. Patent Number 5,881,233), (previously cited and applied), and Yamamoto et al. (U.S. Patent Number 5,767,985) (newly cited). The use of the above disclosed functionality in combination with these specific types of networking devices would have been obvious to one of ordinary skill in the art at the time the invention was made since (a) network device(s) with associated network address(es) are nodes of

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that particular network e.g., IPv4 and/or IPv6, and RFC 2463 expressly provided (b) ICMPv6 is an integral part of IPv6 and MUST be fully implemented by every IPv6 node.” See, Section 1, Page 2. This latter mandate for IP nodes to understand and use ICMP was also fully evident in this documents’ predecessor(s), such as RFC 792 and RFC 1885, dating back prior to 1981.

Thus, the use of ICMP was inherently a part of devices of an IP network, the ICMP directly suggest the usage of various error messages, Echo Request message(s), Echo Reply message(s), and the passing of returned information (e.g., Echo Reply info) to processes other than the sending process(es). Thus, given arbitrary e-mail server(s)/client(s) and/or facsimile terminal machine(s) on an arbitrary IP network, ICMP was inherently incorporated. The teachings expressly provided by Bullard would have enabled an ordinary artisan to construct the invention as claimed as interpreted when modified with the teachings of RFC 2463 and well known terminal types in a typical network at the time of invention, minimally, to accurately account and bill network users for usage of network services, as well as monitoring applications and devices for compliance of operation (i.e., error detection), and usage/availability monitoring.

24. Claims 10-16 are rejected.

Response to Arguments

25. The arguments presented by Applicant in the response, Paper #7, received on 12/22/2003, are not considered persuasive.

26. Applicant argues features of the claimed invention in the majority of the response using verbatim claim language, which as detailed above under 35 USC §112, second paragraph, remains so confusing that no novelty argument can be easily understood or deciphered by the Examiner.

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27. Applicant argues the present invention utilizes an analyzing apparatus on the LAN, other than the error informing apparatus, which analyzes the "Echo request" packet(s). See, Response, Paper #7, received 12/22/2003, Page 9, Lines 3-8. Again, it remains unclear whether the actual "Echo request" ICMP informational message packet is analyzed, or the response to a typical "Echo request", i.e., an "Echo reply" message. As interpreted, a number of teachings cited herein dealt directly with IP packet forwarding, and ICMP packet processing. The combination of these two intrinsically joined technology elements would render the invention as currently claimed obvious to one of ordinary skill in the art.

28. Lastly, Applicant asserts that the prior art of record, as previously applied, recited solely "ordinary usage of ICMP". See, Response, Paper #7, received 12/22/2003, Page 8, Last paragraph. Applicant asserts that while the prior art disclosed the use of ICMP, the same art did not disclose the use of error commands specifically defined within the definition of ICMP. This line of argument is unclear to the Examiner, since if the use of ICMP was utilized, the use of all the associated messages, error and informational, would have been inherently included. Applicant fails to convince the Examiner that the claimed invention utilizes ICMP in a way which is not typical and standard at the time of invention.

Conclusion

29. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

30. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

31. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Marc Thompson whose telephone number is (703) 308-6750. The Examiner can normally be reached on Monday-Friday from 9am to 4pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Jack Harvey, can be reached at (703) 305-9705. The fax phone number for this Group is (703) 872-9306. Inquiries of a general nature relating to the general status of this application or proceeding should be directed to the 2100 Group receptionist whose telephone number is (703) 305-3900.

MARC D. THOMPSON
MARC THOMPSON
PRIMARY EXAMINER

Marc D. Thompson
Primary Examiner
Art Unit 2144